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TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-WO-0036

MEMORANDUM

TO: Jerry Heston, OSC, EPA Region III
Western Response Section
TDD #9211-26
PCS #4226

THRU: Mike Zickler, TATL, Region III

FROM: John Fellinger, ATATL, Region III

SUBJECT: Southern Maryland Wood Treatment Site
Sampling Trip

DATE: 17 December 1992

Background

The Southern Maryland Wood Treatment (SMWT) Site was a CERCLA Removal project (completed in mid 1986) and subsequently a Remedial Site activity. Sampling data obtained by Remedial indicated the possible presence of dioxins (primarily octa) in higher than anticipated levels. This finding limited feasible disposal alternatives for Remedial. The remaining disposal alternatives are all politically objectionable. The Remedial Project Manager has asked for Removal Program assistance with the dioxin problem. OSC Heston tasked the Technical Assistance Team (TAT) to sample the storage tanks in question for identification and incineration perameters.

Action Taken

OSC Heston, RPM Brunker and TAT arrived on site at 0830 hours, 16 December 1992. OSC Heston and RPM Brunker conducted a site walk through with TAT personnel to familiarize them with the site and to identify the storage tanks to be sampled.

TAT performed a structural assessment of the catwalk, ladder, and roof areas of the vertical storage tanks, and determined that the tanks were safe for sampling. Sampling activities were initiated at 0930 hours.

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Two groups of tanks were sampled. On the north end of the site, vertical tanks #1-4, open tank #5 and underground storage tank #7 were designated by the OSC for sampling (see Figure 4-1 of the SMWT Sampling QA/QC Work Plan-attached). On the south end, horizontal tanks #9,10, 12-14 were designated (see Figure 4-1). The sampling event took approximately two hours. A cross reference of tank number sample matrix, and estimated tank volume are found in Table 1 below.

TABLE I

SMWT

TANK #	MATRIX	ESTIMATED TANK VOLUME
1	liquid/sludge	4" heel
2	MT	
3	liquid	4' liquid level
4	liquid	4' liquid level
5	liquid	3' liquid level
7	sludge	1' sludge level
9	solid	8" solid level
10	sludge	3" sludge level
12	solid	6" solid level
13	liquid	2" liquid level
14	solid	4" solid level

The samples were preserved on ice and sent for the following analysis: dioxin (individual isomer), acid extractables, BTU value, TOX, and percent ash. The analytical results and QA/QC reviews will be sent under separate cover.

Future Plans

Based upon analysis, treatment/disposal options will be investigated for the suspected dioxin-containing materials left on site.

Attachments: Sampling QA/QC Plan

Sampling QA/QC Work Plan

Southern Maryland Wood Treating Site

Prepared by
Stephen J. Costenbader
Region III Technical Assistance Team

EPA Project No.: 9211-26
Contractor Work Order No.: 4226
EPA Contract No.: 68-WO-0036

Approvals

Technical Assistance Team

_____ _____

John Fellinger Date
Lead TAT

1.0 BACKGROUND

The site is located in the city of Hollywood in the county of St. Mary's in the state of Maryland (see Figure 1-1). The nearest residents are located aproximately 0.25 miles north of the site. It is a Wood Treating facility on approximately 5 acres which operated between 1965 and 1978 and has been abandoned since 1978. The materials of concern handled by this facility were creosote and PCP. Approximately 50,000 gallons of contaminated materials are still onsite in ten tanks. The materials of concern are creosote, dioxin and pentachlorophenol(PCP).

2.0 DATA USE OBJECTIVES

The objective of this project is to determine the presence, extent, and the magnitude of contamination of the materials remaining in tanks onsite. This data will be used to evaluate the potential treatment methods which could be employed at the site.

3.0 Quality Assurance Objectives

As identified in Sections 1.0 and 2.0 the objective of this project/event applies to the following parameters:

QA Parameters	Matrix	Intended Use Of	QA Level
Acid Extractable	Tank Liquid	Site Characterization	QA-2
	Sludge	Site Characterization	QA-2
Dioxin	Tank Liquid	Site Characterization	QA-2
	Sludge	Site Characterization	QA-2
% Ash	Tank Liquid	Incineration Evaluation	QA-2
	Sludge	Incineration Evaluation	QA-2
TOX	Tank Liquid	Incineration Evaluation	QA-2
	Sludge	Incineration Evaluation	QA-2
BTU	Tank Liquid	Incineration Evaluation	QA-2
	Sludge	Incineration Evaluation	QA-2

4.0 Approach And Sampling Methodologies

The primary consideration in this sampling event is safety. Many of the tanks to be sampled require a structural integredy evaluation, which will be performed on site proir to sampling.

4.1 Sampling Equipment

A polyethylene bailer or stainless steel scoop will be used to obtain environmental samples from the tanks onsite. All sampling will be disposable. In the event that sample equipment decontamination is necessary, the equipment will be cleaned in deionized water and rinsed with methanol.

4.2 Sampling Design

The sampling design is depicted on the attached Sample Locaton Map (Figure 4-1).

4.3 Standard Operating Procedures

4.3.1 Sample Documentation

All sample documents must be completed legibly, in ink. Any corrections or revisions must be made by lining through the incorrect entry and by initiating the error.

FIELD LOG BOOK

The Field Log Book is essentially a descriptive notebook detailing site activities and observations so that an accurate account of field procedures can reconstructed in the writer's absence. All entries should be dated and signed by the individuals making the entries, and should include (at minimum) the following:

1. Site name and project number.
2. Name(s) of personnel on-site.
3. Dates and times of all entries (military time preferred).
4. Descriptions of all site activities, including site entry and exit times
5. Noteworthy events and discussions.
6. Weather conditions.
7. Site observations.
8. Identification and description of samples and locations.
9. Subcontractor information and names of on-site personnel.
10. Date and time of sample collections, along with chain-of-custody information.
11. Record of photographs.
12. Site sketches.

SAMPLE LABELS

Sample labels must clearly identify the particular sample, and should include the following:

1. Site name and number.
2. Time sample was taken.
3. Sample preservation.
4. Initial of sampler(s).

Optional, but pertinent, information:

5. Analysis requested.
6. Sample location.

Sample labels must be securely affixed to the sample container. Tie-on labels can be used is properly secured.

CHAIN OF CUSTODY RECORD

A Chain of Custody record must be maintained from the time the sample is taken to its final deposition. Every transfer of custody must be noted amd signed for, and a copy of this record kept by each individual who has signed. When samples are not under direct control of the individual responsible for them, they must be stored in a locked container sealed with a Chain of Custody seal. The Chain of Custody record should include (at minimum) the following:

1. Sample identification number.
2. Sample information.
3. Sample location.
4. Sample date.
5. Name(s) and signature(s) of sampler(s).
6. Signature(s) off any individual(s) with control over samples.

CHAIN OF CUSTODY SEALS

Chain of Custody Seals demonstrate that a sample container has not been tampered with, or opened. The individual in possession of the sample(s) must sign and date the seal, affixing it in such a manner that the container cannot be opened without breaking the seal. The name of this individual, along with a description of the sample packaging, must be noted in the Field Logbook.

4.3.2 Sampling SOP's for tank sampling

The safe collection of a representative sample from a verticle tank willshould be the criteria for selecting sample locations. A representative sample can be collected using techniques and/or equipment that are designed for obtaining liquids or sludges from various depths. The structure and characteristics of storage tanks present problems with collection of samples from more than one

location; therefore, the selection of sampling devices is important. Depending on the type of vessel and characteristics of the material to be sampled, one can choose bailers, glass thieves, bacon bombs, sludge judges, Coliwasas, or subsurface grab samplers to collect the sample. For depths of less than 5-ft., a bailer, Coliwasa, or sludge judge is used. Sludge judges, subsurface grab samplers, bailers and bacon bombs can be used for depths greater than 5-ft. A sludge judge or bacon bomb can be used to determine if the tank consists of various strata. All sample locations should be surveyed for air quality prior to sampling. At no time should sampling continue with a LEL reading greater than 25%.

4.3.3 Sample Handling and Shipment

Each of the sample bottles will be sealed and labeled according to the following protocol. Caps will be secured with custody seals. Bottle labels will contain all required information including sample number, time and date of collection, analysis requested, and preservative used. Sealed bottles will be placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite. All sample documents will be affixed to the underside of each cooler lid. The lid will be sealed and affixed on at least two sides with EPA custody seals so that any sign of tampering is easily visible.

4.4 Schedule of Activities

Table 1: Proposed Schedule of Work

Activity	Start Date	End Date
Sampling	12/16/92	12/18/92

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

EPA On-Scene Coordinator, Heston, will provide overall direction to Roy F. Weston staff concerning project sampling needs, objectives and schedule. The Roy F. Weston Task Leader, John Fellinger, is the primary point of contact with the EPA On-Scene Coordinator. The Task Leader is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables.

6.0 QUALITY ASSURANCE REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0:

The following QA Protocols for QA-2 data are applicable to all sample matrices and include:

1. Provide sample documentation in the form of field logbooks, the appropriate field data sheets and chain of

custody forms. Chain of custody sheets are optional for field screening locations.
2. All instrument calibration and/or performance check procedures/methods will be summarized and documented in the instrument logbook.
3. The detection limit will be determined and recorded, along with the data, where appropriate.
4. Document sample holding times; this includes documentation of sample collection and analysis dates.
5. Provide initial and continuing instrument calibration data.
6. For soil, sediment and water samples, include rinsate blanks and trip blanks.
7. Performance Evaluation samples are optional, if available.
8. Non-definitive quantitation for unscreened data to provide documentation of quantitative results.

7.0 DELIVERABLES

The Roy F. Weston Task Leader, John Fellinger, will maintain contact with the EPA On-Scene Coordinator, Heston, to keep him/her informed about the technical and financial progress of this project. This communication will commence with the issuance of the work assignment. Activities under this project will be reported in status and trip reports and other deliverables (e.g., analytical reports, final reports) described herein.

Trip Report

A trip report will be prepared to provide a detailed accounting of what occurred during each sampling mobilization. The trip report will be prepared within [two weeks] of the last day of each sampling mobilization. Information will be provided on time of major events, dates, and personnel on-site (including affiliations and phone numbers). The trip report will be organized into three major section: Background, Observations and Activities, and Conclusions and Recommendations (if appropriate).

Analysis

This sampling event requires analytical services. Documentation of lab selection, raw data, or results will be provided in the analytical report.

Data Review

A review of the data generated under this plan will be undertaken. The assessment of data acceptability or useability will be provided separately, or as part of the analytical report.

Analytical Report

An analytical report will be prepared for samples analyzedunder this plan. Information regarding the analyticalmethods/procedures employed, sample results, QA/QC results, chain-of-custody documentation, laboratory correspondence, and raw data will be provided within this deliverable.

Disposal Options Review

A final report will be prepared to correlate available background information with data generated under this sampling event and identify supportable conclusions and recommendations which satisfy the objectives of the OSC.

8.0 DATA VALIDATION

Data generated under this QA/QC Sampling Plan will be evaluated accordingly with appropriate criteria contained in the Removal Program Data Validation Procedures which accompany OSWER Directive #9360.4-1. Specific data review activities for QA 2 should performed by the follwing approach:

1. Of the samples collected in the field, 10% will be confirmed for identification, precision, accuracy, and error determination.
2. The results of 10% of the samples in the analytical data packages should be evaluated for holding times, blank contamination, spike (surrogate/matrix) recovery, and detection capability.
3. The holding times, blank contamination, and detection apability will be reviewed for the remaining samples.

WESTON MAJOR PROGRAMS DIVISION

TDD Number : 9211-26
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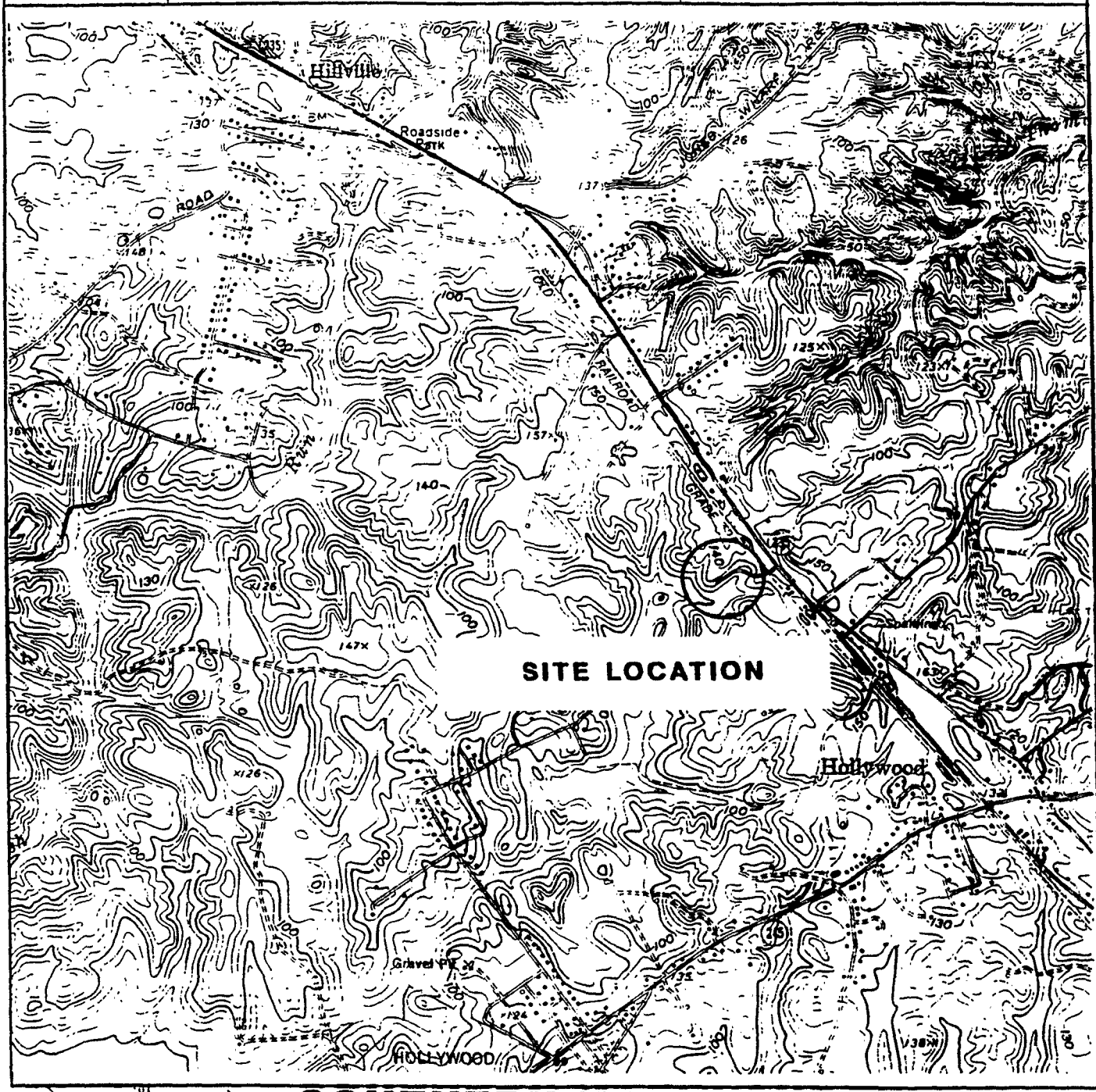
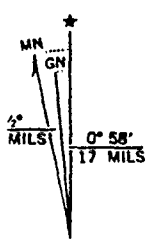


SOUTHERN MARYLAND WOOD TREATING SITE

ST. MARYS COUNTY MARYLAND



QUADRANGLE LOCATION

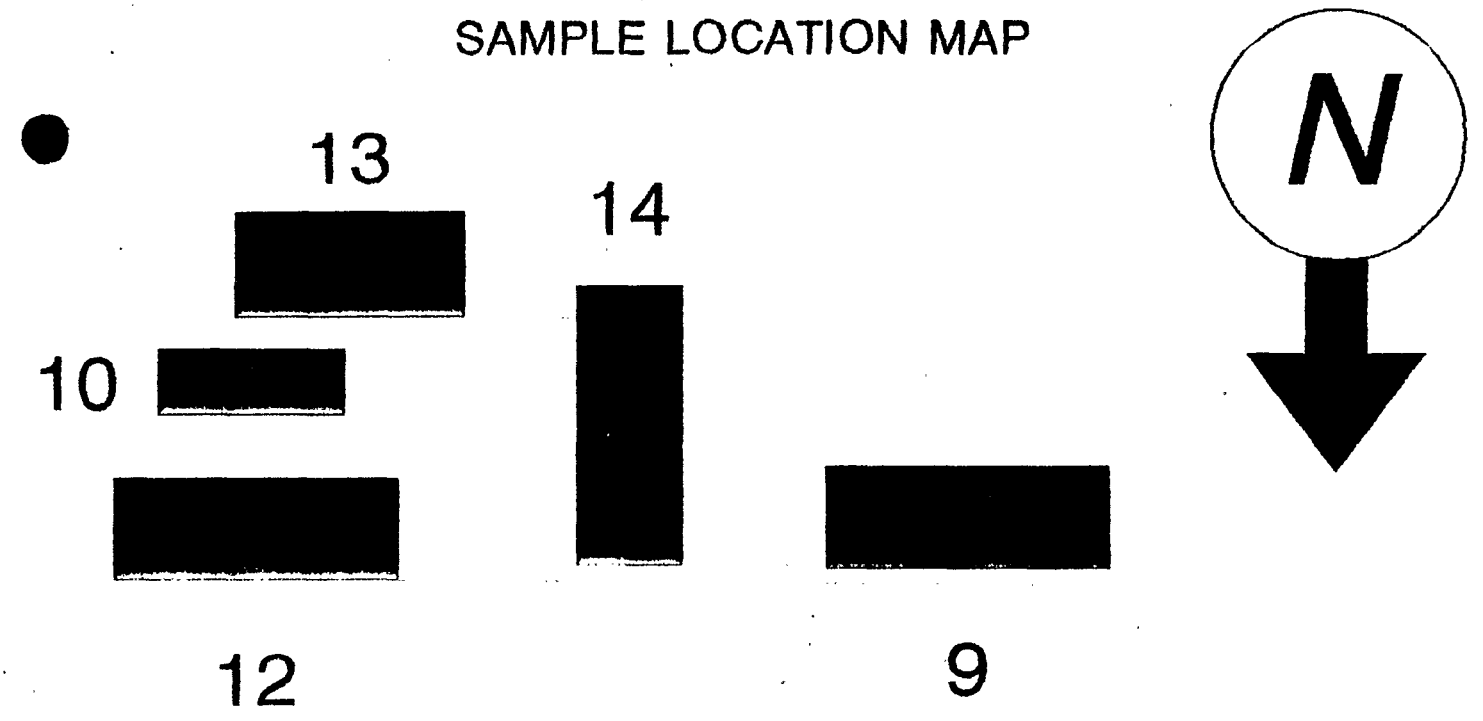
SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

FIGURE 4-1
SAMPLE LOCATION MAP



LEGEND

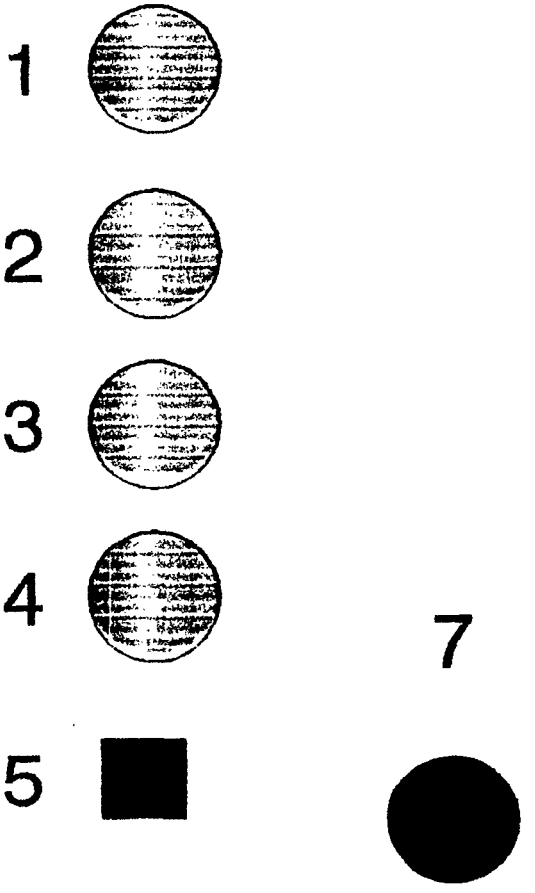
VERTICAL STORAGE TANK

OPEN STORAGE TANK

UNDERGROUND STORAGE TANK

HORIZONTAL STORAGE TANK

Map not to scale



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